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Author
Obilade, Tony

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Author(s): Tony Obilade
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On the logical structure of the serial verbal construction in Yoruba

Tony Obilade
University of Ibadan, Nigeria

Most accounts assume the coordinate basis of the two or more underlying sentences that make up what in surface structure is regarded as a serial verbal construction (Stewart 1963, Williamson 1963, Bamgbose 1974). The serial verbal construction (also referred to as "serial verbs", "verbal combinations", etc.) is quite common in the languages of West Africa. Examples of this kind of construction are:

(1) Yoruba: Olu ti Femi gubu
Olu push Femi fall
(Olu pushed Femi down)

(2) Ade nsun lo

Ade is sleeping go
(Ade is sleeping)

(3) Nupe: Kuta la foma wa nyika
Kuta took net caught fish
(Kuta used a net to catch fish)

(4) Twi: Ode sika no maa me
he-take money that gave me
(he gave me the money)

According to most accounts, the serial verbal construction is made up of two sentences (S_1 and S_2) linked by AND in the deep structure. Thus, (1) would be analyzed as

$$\text{(Olu ti Femi) AND (Femi gubu)}$$
$$S_1 \qquad + \qquad S_2$$

In his account on Yoruba, Bamgbose distinguishes between (1) and (2) as serial constructions. He describes (1) as a "linking type" serial verbal construction while (2) is a "modifying type". His argument is that (2) is not derived from

$$\text{(Ade nsun) AND (Ade nlo)}$$

because "the string of verbs cannot meaningfully be related to more than one underlying sentence". In this paper, I shall try to show that the coordinate approach (as presented by Bamgbose and others) fails to account for several factors, notably Causality, Reversability, Sequence, and Reference. I shall postulate a different logical structure which appears to explain these features

satisfactorily. Finally, I shall try to show that the division of the serial verbal construction in Yoruba into the "linking" and the "modifying" types is just an unnecessary complication of the grammar since (as I shall show) both types can be derived from the same logical structure.

Causality:

According to coordinate accounts, a logical structure like

(Olu ti Femi) AND (Femi subu)

could come out in surface structure in two forms:

(5) Olu ti Femi, Femi si subu

Olu push Femi, Femi and fall

(Olu pushed Femi and Femi fell down)

(6) Olu ti Femi subu

(Olu pushed Femi down)

In (5), the predicate AND is realized as "si", whereas (6) results from the application of the conjunction reduction transformation on (5). One problem with this analysis is that (5) is not semantically equivalent to (6); there is therefore no justification for postulating the same logical structure

$$(S_1 \text{ AND } S_2)$$

for both (5) and (6). The semantic difference between (5) and (6) is matched syntactically. If we apply T-relative to (5) and (6), we get (7) and (8) respectively:

(7) * Femi ti Olu ti Femi si subu

Femi WH- Olu push Femi and fall

(8) Femi ti Olu ti subu

Femi WH- Olu push fall

(Femi whom Olu pushed down)

The ungrammaticality of (7) is explainable in terms of Ross' Coordinate Structure Constraint which blocks the movement by transformation of a conjunct in a coordinate structure. Whether this indicates that (5) but not (6) is a coordinate structure is not even important here. What is important is that the "intermediate" structure (5) from which the serial construction (1,6) is supposedly derived is not semantically equivalent to (6). It should therefore

be obvious that (5) and (6) do not share a common
logical structure. The difference in meaning is due
to the fact that the serial construction (6) contains
the predicate CAUSE in the logical structure whereas
(5) does not. This can be shown by adding a clause
that contains "cause" to both (5) and (6):

$$(9) \; * \; \text{Olu ti Femi ṣubu ṣugbon Ade l'oje}$$
$$\text{but} \quad \text{Ade cause}$$
$$\text{ki Femi ṣubu}$$
$$\text{that Femi fall}$$
> (Olu pushed Femi but it was Ade who
> made Femi fall)

$$(10) \; \text{Olu ti Femi, Femi si ṣubu ṣugbon Ade}$$
$$\text{but} \quad \text{Ade}$$
$$\text{l'oje ki Femi ṣubu}$$
$$\text{cause that Femi fall}$$
> (Olu pushed Femi and Femi fell; but
> it was Ade who made Femi fall)

Adding a "cause-clause" to (5) makes it ungrammatical
because there is now a contradiction in the new
structure (9). Instead of S_1 caused S_2 (as in (5)),
we now have S_1 caused S_2 but S_3 caused S_2. In (10)
however, since there is no causal relationship
between S_1 and S_2, we could claim S_3 caused S_2 and
still preserve grammaticality.

Reversability:

In certain serial constructions, the verbs must
occur in a particular order otherwise one of two things
results: either an unacceptable sequence is produced,
or a change in meaning is effected:

$$(11) \; \text{mo wa mu iwe}$$
$$\text{I come take book}$$
> (I come for the book)

$$(11a) \; \text{mo mu iwe wa}$$
> (I brought a book)

$$(12) \; \text{o gbe igi lo}$$
$$\text{he carry wood go}$$
> (he took the wood away)

$$(12a) \; \text{o lo gbe igi}$$
> (he went to carry the wood)

(11) and (12) are types where reversability results
in change in meaning. (13) and (14) are cases where
the reversal results in ungrammatical sequences:

$$(13) \; \text{o ji iṣu je}$$
$$\text{he steal yam eat}$$
> (he stole a yam and ate it)

$$(13a) \; * \text{o je iṣu ji}$$

(14) o wa   mi ti
      he find me fail
      (he looked for me in vain)
(14a)*o ti mi wa

(15) and (16) are rare instances where reversability
does not affect either grammaticality or meaning:

(15) o lọ   kẹhin gbogbo wa

      he go   last all   us
      (he went last)
(15a) o kẹhin gbogbo wa lọ

      (he went last)
(16) o soju   wa jade
      he before us go-out
      (he left in our presence)
(16a) o jade   nisoju wa
      (he left in our presence)

If we assume the logical structure to be S_1 AND S_2
without specifying the "meaning" of AND, we shall be
missing an important generalization, and we shall not
be able to predict when reversability is permissible.
Sequence:
      There is usually a sequential relationship between
the sentences in a serial verbal construction. Usually
(but not always), the action described in S_1 logically
precedes that described in S_2. Thus, in (1), "ti" (push)
logically precedes "ṣubu" (fall). An adequate logical
representation should indicate this fact. Again, the
flaw in the coordinate approach lies in the non-specifi
cation of the nature of the conjunction. For example,
(17) has at least three meanings, depending on the
meaning assigned to the conjunction AND in the deep
structure:

(17) o njẹun   lọ
      he is eating go
DS 1: o njẹun + o nlọ
      he is eating he is going
      (he ate along the way)
DS 2: o njẹun + continuity
      (he continued to eat)
DS 3: o njeun + o lọ
      (he will eat before going)

Reference:
      (1) Olu ti Fẹmi ṣubu
is analyzed as Olu ti Femi + Femi subu. It is not

clear why "Femi", but not "Olu" is the subject NP of "subu". Let us consider (18) which is ambiguous:

(18) Olu le   Ade jade
     Olu drive Ade go-out

meaning 1: Olu le Ade + Ade jade (Only Ade went out)
meaning 2: Olu le Ade + Olu jade + Ade jade (both of
           them went out)

We might claim that the subject NP of the second verb is assigned in accordance with the meaning intended; the only snag is that in coordinate formulations, the logical structures for meanings 1 and 2 (above) are identical. Let us consider (19):

(19) Olu gbe   aga   wa
     Olu carry chair come
     (Olu brought a chair)

This is analyzed as

     Olu gbe aga + Olu wa

presumably because "aga" (chair) is marked (-animate) in the lexicon and cannot select "wa" (come). But consider (20) which does not contain any animate NP:

(20) Ategun gbe   ewe   wa
     wind   carry leaf come
     (the wind brought leaves)

In this case, we cannot avoid structures like "ewe wa", or "ategun gbe ewe", or "ategun wa". Furthermore, (21a-c) are well-formed sequences in the language:

(21) a. Otutu mi ti lo
        cold my has gone
        (my cold is gone)
     b. Ojo mbo
        rain is coming
        (it's going to rain)
     c. Iji nja
        storm is fighting
        (a storm is raging)

Thus, there appears to be no regularity in the way the coordinate approach assigns NP's to surface verbs.

Proposed logical structure:

In the light of the above examples, it becomes necessary to seek a logical structure that would account for some or all of the facts mentioned here. The logical structure proposed here postulates that serial constructions contain embedded predications. The logical structure for (1) would be

     (Cause) Olu,((Subu) Femi)

There are several reasons why this logical structure is considered better than the coordinate type. For one

thing, it takes care of such features as causality, sequence, and reference. For example, the logical structure clearly shows "Olu" as the subject of "Cause", and "Femi" as the subject of "subu". Also, it explains the similarity in meaning of the following:

(22) Olu ti   Femi subu
      Olu push Femi fall
(23) Olu gbe   Femi subu
      Olu carry Femi fall
(24) Olu je ki   Femi subu
      Olu let that Femi fall
(25) Olu mu ki   Femi subu
      Olu hold that Femi fall
(26) Olu fa   Femi subu
      Olu pull Femi fall

Since each sentence (from (22-26)) could be paraphrased as "Femi fell and this was caused by Olu", we may postulate CAUSE as a higher predicate which may be spelt out in different forms in the surface structure. It should be noted also that in (23),

Olu gbe Femi

is not a constituent, so it would be wrong to analyze it (23) as

Olu gbe Femi + Femi subu

Similarly, we analyze

(19) Olu gbe aga wa
      (Olu brought a chair)

as

(Cause) Olu, ((wa) aga)

- since the main point of the construction is not that "Olu took a chair" but that "the chair is here" and "Olu is the cause of that event". Let us consider (27) which is what is derived after the application of T-neg. on (19):

(27) Olu o   gbe   aga   wa
      Olu neg. carry chair come
      (Olu did not bring a chair)

In the coordinate approach, the deep structure oc (27) would look like (28):

(28) Olu o   gbe   aga + Olu wa
      Olu neg. carry chair + Olu come

However, non-serialization of (28) yields (29) - an ungrammatical sequence:

(29)* Olu o gbe aga, Olu si wa

Since serialization is optional, it means the deep
structure postulated (in 28) is wrong. The proposed
logical structure for (27) is as follows:

(NOT)((Cause) Olu,((wa) aga))
(i.e., it is not the case that Olu caused the chair to
be here).

The so-called "modifying type" serial construction
as exemplified below (2)

(2) Ade nsun   lo

Ade is sleeping go
(Ade is sleeping)

is really not different in logical structure from all
the others we have been considering; we only need to
realize that "lo" in (2) has little or nothing to do
with "going"; rather, it is a surface reflex of the
aspectual predicate "Continuity" which is a higher
predicate in the deep structure. Consider the following:

(30) O nsoro   lo

he is speaking go
(he continued to speak)

(31)* O soro   lo

he speak go

(32) O jeun   lo

he eat   go
(he ate before he left)

(33) O njeun   lo

he is eating go
(he continued to eat)

It appears that wherever "lo" denotes continuity, the
other verb must be marked for "progressiveness". Where
"lo" is a true surface verb (32), this restriction does
not apply. The proposed logical structure for (2) and
other "modifying" serial constructions is as follows:

(Continuity)((sun) Ade)

The term "modifying serial construction" is therefore
found to be not only unnecessary but utterly misleading.

Serialization appears to be a complex phenomenon
(especially in surface structure) but it is quite possibl
that the complexity is in fact due to the lack of really
deep studies of the phenomenon. What is urgently needed
is a detailed analysis of the type of verbs that admit
of serialization as well as the implications of that for
word order. It could even be that there is a relationshi
between serialization and complexity in lexical rules -
as pointed out in George (1976).

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